Scyllium maculatum	.. ..	,,	2ft.
Cheloscyllium furvum‡	.. ..	,,	3ft.
Crossorhinus barbatus	.. ..	,,	6ft. 8in.
Heterodontus philippi	.. ..	,,	4ft.
,, *galeatus*	.. ..	,,	3ft. 6in.
? *Rhina squatina* ..	.. ..	,,	3ft. 9in.
Mustelus antarcticus	.. ..	,,	3ft. 6in.
Pristiophorus cirratus	.. ..	,,	3ft. 6in.

Twenty species in all. Baron N. de M. Maclay and the Hon. Wm. Macleay have already given us some valuable and interesting details on our Australian Sharks, which will be found in a previous number of our proceedings.

Plate IV.

Fig. 1.—Shows the general outline of the fish.
,, 2.—The form of the head.
,, 3.—The nostril.
,, 4.—Teeth of the upper jaw.
,, 5.—Teeth of the lower jaw.
,, 6.—Shows the outline of the parabolic form of the head.

On some new Amphipods from Australia and Tasmania.

By William A. Haswell, M.A., B.Sc., Curator of the Queensland Museum, Brisbane.

Plates V.—VII.

Talitrus assimilis, *sp. nov.*, Plate V., fig. 1.

Distinguished from *T. sylvaticus*, which it otherwise very closely resembles, by the form of the posterior gnathopoda—the meros having a truncate process below, the carpus having its lower border convex, and the propodos having a longitudinal, hairy ridge.

‡ A new species, closely allied to *C. modestum*, Gunth.

Hab. Tasmania (Australian Museum, collected by Mr. Kendall Broadbent).

Talorchestia limicola, *sp. nov.*, Plate V., fig. 2.

Male.—Superior antennæ as long as the cephalon and first segment of the pereion, flagellum as long as the last two segments of the peduncle, of five articuli. Inferior antennæ four times as long as the superior pair, peduncle and flagellum sub-equal, the latter consisting of twelve articuli. Anterior gnathopoda having the carpus produced below into a rounded prominence, the propodos sub-quadrate, broader distally than proximally, palm transverse; dactylos well-developed. Posterior gnathopoda with the propodos large, sub-quadrate, broader distally than proximally; palm transverse, armed externally with two rounded teeth, separated by a deep excavation from the rest of the palmar border; dactylos powerful, pointed, as long as the palm, provided internally with a rounded protuberance.

Female.—Anterior gnathopoda with the carpus and propodos of nearly equal length, the former sub-triangular; the propodos long-ovate, with two hair-armed serrations on its upper and lower borders; dactylos two-thirds of the length of the propodos, acuminate. Posterior gnathopoda small, carpus and propodos sub-equal; the latter with an obscure, downwardly projecting process at its distal extremity; dactylos short, articulating near the middle of the lower border of the propodos, and not nearly attaining the distal extremity of the latter. Length 7/20 in.

Hab. Mangrove-swamps, near Bowen, Queensland, under decaying wood, etc.

This species is distinguished from *T. quadrimana*, Dana, by the form of the palm and dactylos of the posterior gnathopoda in both sexes.

Talorchestia terræ-reginæ, *sp. nov.*, Plate V., fig. 4.

Male.—Superior antennæ rather longer than the cephalon; flagellum as long as the last two segments of the peduncle, of

six to eight articuli. Inferior antennæ more than four times as long as the superior pair; flagellum as long as the last segment of the peduncle, of about 20 articuli. Anterior gnathopoda with the carpus longer than the propodos, the latter slightly curved downwards, narrow, of nearly uniform breadth from end to end, slightly dilated at the infero-distal angle; palm transverse; dactylos longer than the palm. Posterior gnathopoda with the propodos large, heart-shaped, the palm oblique, armed with short bristles, and provided near the distal end with a prominent, compressed, curved process which lies in an open hollow of the opposed border of the dactylos when the hand is closed.

Female.—Anterior gnathopoda with the carpus longer than the propodos, both narrow and armed with a few stout setæ. Posterior gnathopoda with the propodos provided with a short rounded projection directed upwards, at the distal end of its dorsal border; extremity of dactylos scarcely reaching the distal extremity of the propodos. Length 2/5 in.

Hab. Port Denison, Queensland, on sandy beach.

Talorchestia ? marmorata, *sp. nov.*, Plate V., fig. 3.

Male.—Superior antennæ longer than the cephalon; flagellum rather longer than the last segment of the peduncle, composed of five articuli. Inferior antennæ rather more than three times as long as the superior pair; peduncle stout; flagellum as long as the peduncle, composed of about 17 articuli. Anterior gnathopoda with the carpus sub-triangular, its infero-distal angle produced into a compressed, rounded process; the propodos sub-equal with the carpus, much broader distally than proximally, the infero-distal angle produced and rounded; the palm transverse, armed with short setæ; the dactylos well-developed, shorter than the palm. Posterior gnathopoda large; carpus minute, propodos heart-shaped, the palm oblique, armed with numerous short setæ, and defined by a minute acute tooth. Pereiopoda very thick,

base of last pair not dilated behind. The whole of the integument very hard. Colour marbled red and white. Length 13/20 in.

Hab. Tasmania (Australian Museum), collected by Mr. Kendall Broadbent.

Talorchestia pravidactyla, *sp. nov.*, Plate V., fig. 5.

Male.—Superior antennæ scarcely so long as the cephalon and the first segment of the pereion; flagellum as long as the last two segments of the peduncle, composed of seven articuli. Inferior antennæ more than three-times as long as the superior pair; last segment of the peduncle more than twice as long as the penultimate; flagellum as long as the last segment of the peduncle, of 21 articuli. Anterior gnathopoda with the propodos broader distally than proximally, the infero-distal angle produced into a short narrow process; palm transverse, concave; dactylos acute, rather longer than the palm. Posterior gnathopoda having the propodos large, heart shaped, the palm oblique, defined by a blunt tooth, with a second tooth close to it on the distal side, and a rounded elevation about the middle; dactylos geniculate, its apex lying between the two palmar teeth when the hand is closed. Last pair of pereiopoda with the basos dilated posteriorly.

Female.—Inferior antennæ much smaller than in the male. Anterior gnathopoda with the carpus much longer and broader than the propodos, the latter about twice as long as broad, rather narrower at its distal, than at its proximal end. Posterior gnathopoda with the propodos narrow, thrice as long as broad, the dactylos very short, inserted nearer the distal end than the middle of the ventral border of the propodos. Length 13/20 in.

Hab. Tasmania (Australian Museum).

Talorchestia quadrimana, *var.* ? Plate VI., fig. 1.

Differs from the New South Wales species in the smaller size of the posterior gnathopoda of the male, and in various minor points.

Hab. Port Denison.

Genus Aspidophoreia, *novum*.

Coxæ of the posterior gnathopoda and of the first and second pairs of pereiopoda greatly expanded, deeper than the respective segments, those of the three last pairs of pereiopoda small, that of the third pair bilobed—the posterior lobe larger than the anterior. Antennæ simple; the superior pair shorter than the inferior. Mandibles without an appendage. Maxillipedes with a pointed dactylos. Gnathopoda sub-chelate—the posterior pair much larger than the anterior. Posterior pleopoda uniramous—the ramus uniarticulate. Telson squamiform, cleft to the base.

This genus differs from *Stenothoë*, Dana, in having the ramus of the last pair of pleopods uniarticulate; in most of its characters it approaches *Allorchestes*—being distinguished from that genus only by the largely developed anterior coxæ, and the character of the telson.

Aspidophoreia diemenensis, *sp. un.*, Plate VI., fig. 2.

Superior antennæ as long as the cephalon and the first segment of the pereion, rather longer than the peduncle of the inferior pair; flagellum longer than the peduncle, of about 20 articuli. Inferior antennæ with the peduncle stout, the fourth joint the largest; flagellum slightly shorter than the peduncle, of about 20 articuli. Anterior gnathopoda with the carpus sub-triangular in outline; the propodos larger than the carpus, irregularly triangular, palm transverse, deeply concave. Posterior gnathopoda large; propodos heart-shaped, palm oblique, armed with short bristles. Basa of three posterior pairs of pereiopoda broad, that of the fifth pair much expanded behind; their anterior borders serrate and armed with setæ, the posterior border smooth. Ramus of last pair of pleopoda short, conical, acute. Telson consisting of two quadrangular scales, separated by a linear fissure. Surface (in the spirit specimen) ornamented with marbled spots of red, brown, and white, and ornamented with numerous, very minute, white dots, arranged in clusters of three or four. Length 4/5 in.

Hab. Tasmania (Australian Museum, collected by Mr. K. Broadbent).

Atylus microdeuteropus, *sp. nov.*, Plate VI., fig. 3

Eyes oval, large, but separated by a broad space above. Superior antennæ rather longer than the cephalon and first three segments of the pereion, the flagellum nearly twice as long as the peduncle, its articuli armed distally with short hairs above and below—every third or fourth having its distal and inferior angle dilated and crowned with auditory cilia. Inferior antennæ about half the length of the animal, the flagellum more than twice as long as the peduncle. Anterior gnathopoda with the propodos ovate, the palm oblique, with three short spines near its proximal end; a strong appressed spine on the propodos over the insertion of the dactylos; dactylos toothed internally. Posterior gnathopoda rather smaller than the anterior pair, propodos ovate, armed with three stout spines near the distal extremity of the palm; palm oblique; dactylos toothed internally. Rami of the last pair of pleopoda armed laterally with a few short setæ in the axil of each of which is situated a delicate hair. Length nearly 1/4 inch.

Hab. Clark Island, Port Jackson; Botany Bay.

Atylus megalophthalmus, *sp. nov.*, Plate VI., fig. 4.

Eyes very large. Superior antennæ as long as the cephalon and pereion; flagellum twice as long as the peduncle, every second articulus very slightly dilated at its inferior and distal angle. Inferior antennæ longer than the superior pair, the flagellum about three times as long as the peduncle. Gnathopoda subequal—the posterior pair slightly smaller than the anterior; propodos ovate, armed with a few plumose setæ, palm oblique, undefined. Last pair of pleopods with the rami armed along their edges with numerous serrations, each with a short seta in the axil of which is inserted a delicate hair. Length about 1/4 in.

Hab. Clark Island, Port Jackson.

This and the preceding are very variable species, the size of the eyes and their degree of approximation above, the length of the antennæ and the form of the gnathopoda being all subject to considerable variations.

Pherusa australis, *sp. nov.*, Plate VII., fig. 1.

Six anterior segments narrow; the four following broad. Cephalon with a small rostrum. Superior antennæ nearly as long as the cephalon and pereion; first two joints of the peduncle stout; third small, scarcely distinguishable from the articuli of the flagellum; flagellum slender, about twice as long as the peduncle. Inferior antennæ slightly longer than the superior pair; flagellum scarcely twice as long as the peduncle. Anterior gnathopoda with the propodos ovate, the palm oblique, undefined, armed with short setæ. Posterior gnathopoda larger than the anterior pair, the propodos ovate, dilated proximally, armed with a few short setæ and hairs towards the palmar border; palm oblique, undefined. Fifth pair of pereiopoda much longer than the preceding pairs; the dactylos elongate, slender, straight. Last pair of pleopoda with the rami lanceolate, acute, each armed on the inner border with three setæ. Length 1/5 in.

Hab. Botany Bay.

Moera crassipes, *sp. nov.*, Plate VII., fig. 2.

Antennæ sub-equal, nearly as long as the cephalon and pereion, fringed below with long slender hairs. First pair of gnathopoda with the carpus and propodos sub-equal, their upper border nearly straight, the lower strongly convex. Posterior pair of gnathopoda unequal, the right much larger than the left; the palm deeply concave, with a minute tooth about its middle, and defined with a second, prominent, acute tooth. Fourth and fifth pairs of pereiopoda very much longer and broader than the rest, the fourth pair the broadest. Rami of last pair of pleopoda broad-lanceolate,

rather short. Halves of telson conical, each tipped with a stout spine.

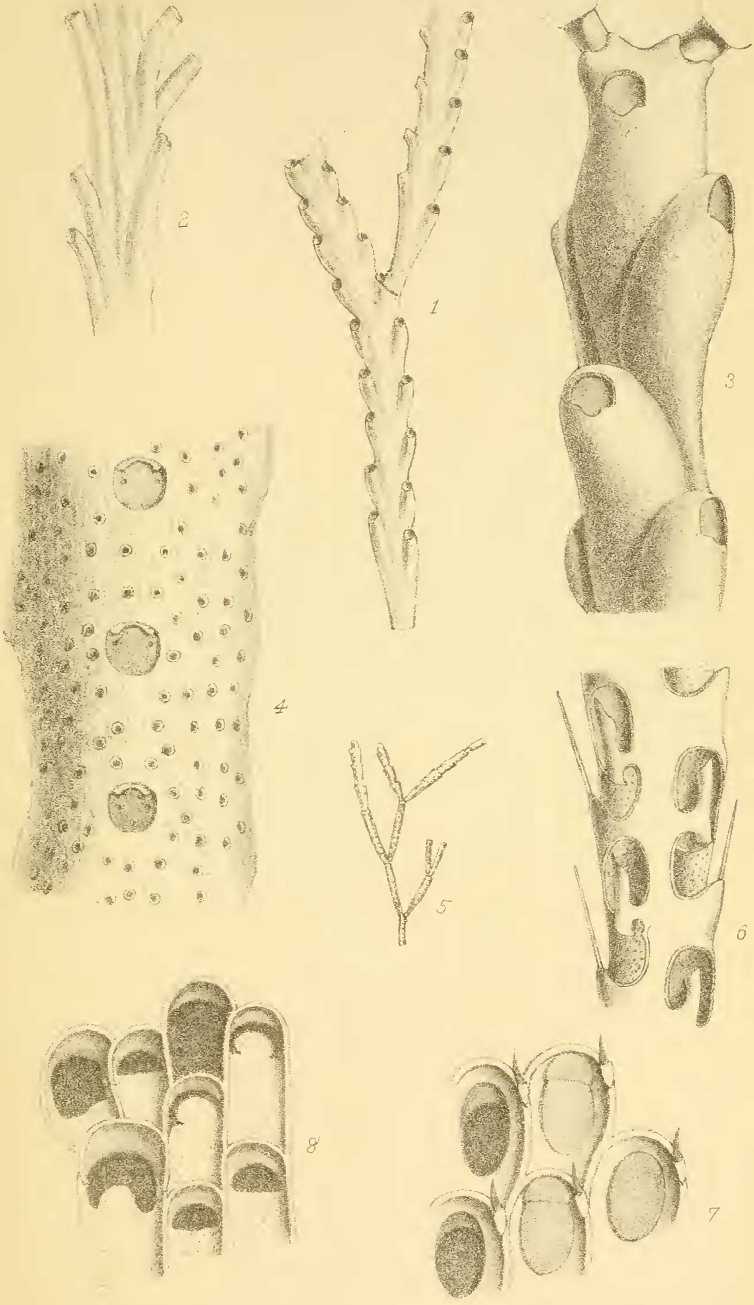
Hab. Port Jackson.

Cyrtophium (?) hystrix, *sp. nov.*, Plate VII., fig. 3.

Cephalon, pereion and first two segments of pleon armed with prominent spines on the dorsal and lateral surfaces; lateral borders of the second to the sixth segments of the pereion produced outwards and upwards, acuminate. Coxæ of the pereiopoda each armed with a small point in its lower border. Antennæ stout, superior pair as long as the cephalon and pereion, basal joint of the peduncle short, with an acute spine above; third joint the longest; flagellum shorter than the last segment of the peduncle. Inferior antennæ longer than the superior pair, very stout, fifth joint of the peduncle longer than the fourth, flagellum much shorter than the last segment of the peduncle. Anterior gnathopoda with the carpus and propodos sub-equal, both armed ventrally with a row of setæ, palm straight, oblique; dactylos longer than palm. Posterior gnathopoda with the carpus very small, the propodos large, ovate, narrower at its distal than at its proximale end, palm nearly longitudinal, undefined. Pereiopoda subequal, the fourth pair longer than the preceding, the joints broad, the dactylos very stout. Penultimate pair of pleopoda with two unequal rami, the outer shorter and narrower than the inner, tipped with two acute bristles, the inner broad, armed terminally and internally with a few strong bristles. Last pair of pleopoda uniramous, minute, almost concealed under the broad rounded telson.

Hab. Port Jackson.

The absence of the fourth segment of the pleon is probably sufficiently important to separate this species from the genus *Cyrtophium* of Dana (to which, however, it otherwise bears a close resemblance; but, having but a single, somewhat mutilated



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